88888888888 888888888888 888888888888	В	AAAAAAA AAAAAAA AAAAAAA	4	\$	RRRR	RRRRRRR RRRRRRR RRRRRRRR		
888	BBB	ÄÄÄ	AAA	\$\$\$ \$\$\$	RRR	RRR RRR		LLL
888	888	AAA	AAA	SSS	RRR	RRR	ΪΪΪ	
888	888	ÄÄÄ	AAA	SSS	RRR	RRR	İİİ	
BB B	BBB	AAA	AAA	ŠŠŠ	RRR	RRR	ήήή	LLL
888	BBB	AAA	AAA	SSS	RRR	RRR	ŤŤŤ	iii
8888888888	В	AAA	AAA	SSSSSSSS		RRRRRRR	ŤŤŤ	ili
8888888888		AAA	AAA	ŠŠŠŠŠŠŠŠŠ		RRRRRRR	ŤŤŤ	iii
8888888888		AAA	AAA	SSSSSSSS		RRRRRRR	TTT	ΙΙΙ
BBB	888			\$\$\$	RRR	RRR	TTT	LLL
888	888	*********		ŞŞŞ	RRR	RRR	ŢŢŢ	LLL
888	BBB			SSS	RRR	RRR	ŢŢŢ	LLL
88 8	BBB	AAA	AAA	SSS	RRR	RRR	III	řřř
888	888	AAA	AAA	SSS	RRR	RRR	ŢŢŢ	iřř
888	BBB	AAA	AAA	222	RRR	RRR	ŢŢŢ	LLL
88888888888888888888888888888888888888		AAA	AAA	\$\$\$\$\$\$\$\$\$\$\$\$\$	RRR	RRR	ŢŢŢ	rrrrrrrrrrr
BBBBBBBBBBB		AAA	AAA	\$\$\$\$\$\$\$\$\$\$\$\$\$	RRR	RRR	111	
00000000000	D	AAA	AAA	SSSSSSSSSS	RRR	RRR	TTT	

PP PP PP (PP)

BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	\$	\$		000000 000000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
		\$				

FILEID**BASSTOP

10

11

12

14

16

MODULE BAS\$STOP (IDENT = '1-006') =

! File: BASSTOP.B32 EDIT: PL1006

BEGIN

1 1 *

1 !*

1 1 *

1 !*

1 1 *

0002

0004

0005 0006 0007

0008

0009 0010

0011

0012 0013

0014 0015 0016

0017 0018 0019

0020

0021 0022

0024

0032 0033

0034 0035

0036

0037 0038

0039

0040

0041

0042

0044

0045

0046

0047

0048 0049

0050

0051

0052

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! FACILITY: BASIC-PLUS-2 Miscellaneous

ABSTRACT:

This module contains the BASIC STOP statement, which prompts the user to EXIT or CONTINUE.

ENVIRONMENT: VAX-11 User Mode

AUTHOR: John Sauter, CREATION DATE: 10-MAY-1979

MODIFIED BY:

1-001 - Original.

1-002 - Change LIB\$S and OTS\$S to STR\$. JBS 21-MAY-1979 1-003 - Use LIB\$GET_COMMAND instead of doing BASIC I/O. JBS 14-SEP-1979

1-004 - Add BAS\$\$STOP_INIT, for the RUN command. JBS 15-SEP-1979

1-005 - If just a return is typed then just signal WHAT?. FM 5-FEB-81. 1-006 - LIB\$STOP should be declared EXTERNAL. PLL 20-Nov-81 1 !--

1 !<BLF/PAGE>

1122222222223333333333333 40 41

42 44 45

46

48

50

51

52

Page

BAS\$STOP 1-006			B 1 16-Sep-1984 01:15:37 14-Sep-1984 11:56:40
: 111 112 : 113 : 114 : 115	0204 1 0205 1 0206 1 0207 1 0208 1 0209 1	! The following are the error codes	used in this module.
116 117 118	0209 1 0210 1 0211 1 0212 1	EXTERNAL LITERAL BAS\$K_STO : UNSIGNED (8), BAS\$K_WHA : UNSIGNED (8);	! Stop ! What?
120 121 122 123	0213 1 0214 1 0215 1 0216 1	The following code is used in the	call to \$ EXIT
124 125 126	0217 1 0218 1 0219 1	EXTERNAL LITERAL BAS\$_STO:	! Stop

VAX-11 Bliss-32 V4.0-742 [BASRTL.SRC]BASSTOP.B32;1

Page 3 (2)

```
C 1
16-Sep-1984 01:15:37
                                                                                                          14-Sep-1984 11:56:40
12901233456789012345
113333456789012345
                                    GLOBAL ROUTINE BAS$STOP : NOVALUE =
                                                                                                                       ! Exit or Continue
                                       FUNCTIONAL DESCRIPTION:
                                                  Prompt the user to EXIT or CONTINUE his program. On entry a message is signalled to show the line number of the STOP statement. If the user elects to exit, we call SYS$EXIT.
                                        FORMAL PARAMETERS:
                       0230
                                                  NONE
                                        IMPLICIT INPUTS:
                                                  NONE
                       0236
0237
                                        IMPLICIT OUTPUTS:
146
                       0238
                       0239
                                                  NONE
148
149
150
151
152
153
154
155
156
157
                       0240
                       0241
                                        ROUTINE VALUE: COMPLETION CODES:
                    0242
                       0244
                                                  NONE
                                        SIDE EFFECTS:
                                                  May never return to its caller.
158
159
                       0250
0251
                                1!--
160
                                           BEGIN
161
162
163
                                           LOCAL
                                                  PROMPT_DESC : BLOCK [8, BYTE],
A_DESC : BLOCK [8, BYTE] VOLATILE,
A_BUF : REF VECTOR [65535, BYTE],
EXIT_OR_CONT;
                                                                                                                           The prompt
String to receive message
164
165
                                                                                                                           Characters of that string
166
                                                                                                                          flag for what we are to do
167
                       0260
168
169
170
171
172
173
174
175
176
                       0261
                                        Enable a handler to free our string in case we are running under
                       0262
0263
0264
0265
0266
0267
0268
0270
0271
0273
0276
                                        the RUN command, and the run-time environment elects not to
                                    ! return here after our STOP signal.
                                           ENABLE
                                                  FREE_STRINGS (A_DESC);
178
179
                                     ! Set up the descriptors.
                                           PROMPT_DESC [DSC$W_LENGTH] = %CHARCOUNT ('#');
PROMPT_DESC [DSC$B_DTYPE] = DSC$K_DTYPE_T;
PROMPT_DESC [DSC$B_CLASS] = DSC$K_CLASS_S;
PROMPT_DESC [DSC$A_POINTER] = UPLIT (%ASCII'#');
A_DESC [DSC$W_LENGTH] = 0;
180
181
182
183
184
```

Page

```
186
187
                     0280
188
189
190
191
192
194
195
196
197
                    0289
198
                    0290
199
0300
                    0301
                    0302
                    0304
                     0305
                    0306
0307
                    0308
                    0309
                    0310
                    0311
                    0312
0313
0314
0315
0316
0317
0318
0319
0320
                    0330
                    0331
0332
0333
 240
```

```
A_DESC [DSC$B_DTYPE] = DSC$K_DTYPE_T;
A_DESC [DSC$B_CLASS] = DSC$K_CLASS_D;
A_DESC [DSC$A_POINTER] = 0;
 Print a message giving the line number of the STOP statement.
 This is done using the signalling facility.
   BAS$$SIGNAL (BAS$K_STO);
 Now we wait for a typein to indicate whether to exit or continue.
 This is suppressed in the RUN environment.
   IF ( NOT .RUN_CMD)
   THEN
        BEGIN
        00
            BEGIN
            LOCAL
                 OUT_LEN,
GET_COM_STATL
 Ask whether or exit or continue. The prompt is a #.
            GET_COM_STATUS = LIB$GET_COMMAND (A_DESC, PROMPT_DESC, OUT_LEN);
            IF ( NOT .GET_COM_STATUS) THEN LIB$STOP (.GET_COM_STATUS);
 If just a return is typed then sigal WHAT.
 If the first character of the response is a C, we are to continue.
 If an E, we are to exit. Otherwise, print an error message and
! ask again.
             IF .OUT_LEN EQL 0
            THEN
                 BEGIN
                 BAS$$SIGNAL (BAS$K_WHA);
                 EXIT_OR_CONT = 0;
                 END
            ELSE
                 BEGIN
                 A_BUF = .A_DESC [DSC$A_POINTER];
                 SELECTONE .A_BUF [0] OF
                     SET
                     [%C'C', %C'c'] :
                          EXIT_OR_CONT = 1;
                     [XC'E', XC'e'] :
                          EXIT_OR_CONT = 2;
```

```
BAS$STOP
1-006
                                                                                   16-Sep-1984 01:15:37
                                                                                                                  VAX-11 Bliss-32 V4.0-742 [BASRTL.SRC]BASSTOP.B32;1
                                                                                   14-Sep-1984 11:56:40
                     0334
0335
0336
0337
0338
0339
    56666
                                                         [OTHERWISE] :
                                                              BEGIN
                                 Print the WHAT message by signaling.
                                                              BAS$$SIGNAL (BAS$K_WHA);
EXIT_OR_CONT = 0;
END;
                                                         TES:
                                                    END:
                                         UNTIL (.EXIT_OR_CONT NEQ 0);
                                 When we get here, we have received either an EXIT or CONTINUE
                                  command. First free our string.
    260
    261
262
263
                                         STR$FREE1_DX (A_DESC);
                     0354
0355
0356
0357
                               I If the user said to exit, do so.
    264
   266
267
268
269
270
271
272
273
                                         If (.EXIT_OR_CONT EQL 2) THEN $EXIT (CODE = BAS$_STO);
                     0359
                     0360
                                         END:
                    0361
0362
0363
0364
0365
0366
                               ! Otherwise, return to our caller.
                                    RETURN:
                                    END:
                                                                                              ! end of BAS$STOP
                                                                                                .TITLE
                                                                                                          BAS$STOP
                                                                                                          11-0061
                                                                                                 .IDENT
                                                                                                .PSECT
                                                                                                          _BAS$DATA,NOEXE, PIC,2
                                                                 00000000 00000 RUN_CMD:.LONG
                                                                                                 .PSECT
                                                                                                          _BAS$CODE,NOWRT, SHR, PIC,2
                                                         00
                                                              00
                                                                       23 00000 P.AAA:
                                                                                               .ASCII \#\<0><0><0>
                                                                   00
                                                                                                          LIB$STOP, LIB$GET_COMMAND
BAS$$SIGNAL, STR$FREE1_DX
                                                                                                 .EXTRN
                                                                                                .EXTRN
                                                                                                          LIBSMATCH_COND, BASSSSTOP
BASSK_STO, BASSK_WHA
BASS_STO, SYSSEXIT
                                                                                                .EXTRN
                                                                                                 .EXTRN
                                                                                                 .EXTRN
                                                                       0010 00000
9E 00002
                                                                                                                                                                      0220
                                                                                                 .ENTRY
                                                                                                          BAS$STOP, Save R2,R3,R4
                                                                          9E
72
70
                                                  54
5E
                                                       0000000G
                                                                     00
                                                                                                MOVAB
                                                                                                          BAS$$SIGNAL, R4
                                                                                                          #20, SP
A_DESC
                                                                     14
                                                                              00009
                                                                                                SUBL 2
                                                                     ÀÉ
CF
                                                                                                                                                                      0252
                                                                              00000
                                                                                                CLRQ
                                                            0097
                                                   6D
                                                                          DE 0000f
                                                                                                MOVAL
                                                                                                          95, (FP)
```

					10 10	5-Sep-19 4-Sep-19	84 01:15 84 11:56	5:37 VAX-11 Bliss-32 V4.0-742 5:40 [BASRTL.SRC]BASSTOP.B32;1	Page 7 (3)
0C 10	AE AE	010E0001	8F	DO	00014		MOVL	#17694721, PROMPT_DESC	: 0272
-		DD 04	AF AE	9É 84	0001C		MOVAB CLRW	P.AAA, PROMPT_DEST+4 A_DESC	: 0275 : 0276
06 07	AE AE		05 0E	90 90	00024 00028		MOVB MOVB	NT4, A_DESC+2 N2. A_DESC+3	: 0277 : 0278
•		08	AE	04	0002C		CLRL	A DEST+4 MBAS\$K_STO, -(SP)	: 0279
	7E 64	00G	8F 01	9A FB	0002F 00033		MOVZBL CALLS	WI. BASSSIGNAL	: 0284
	60	00000000.	E F 5 E	E8 DD	00036 0003D	15:	BLBS PUSHL	RUN_CMD, 8\$	0290
		10	AE	9F	0003F	10.	PUSHAB	PROMPT DESC	: 0304
0000000G	00	0Č	AE AE 03	9F FB	00042		PUSHAB Calls	A_DESC #3, LIB\$GET_COMMAND	;
	09		50	E8	0004C		BLBS	GET_COM_STATUS, 2\$ GET_COM_STATUS	: 0306
00 00000 0	00		50 01	DD FB	0004F 00051		PUSHL CALLS	#1, LIB\$STOP	; ;
			6E 26	D5 13	00058 0005A	2\$:	TSTL Beal	OUT_LEN 6\$: 0315
. 7	53 8F	80	ΑE	DŌ	0005C		MOVL	A_DESC+4, A_BUF	: 0323
43	8f		63 06	91 13	00060 00064		CMPB Beql	(A_BUF), #67 3\$: 0328
63	8F		63	91 12	00066		CMPB	(A_BUF), #99	
	52		05 01	DO	0006A	3\$:	BNEQ MOVL	#1, EXIT_OR_CONT	0329
45	8F		1A 63	11 91	0006F 00071	45.	BRB CMPB	7\$ (A_BUF), #69	; 0331
			06 63	13	00075	40.	BEQL	55	;
65	8F		05 05	91 12	00077 0007B		CMPB BNEQ	(A_BUF), #101 6\$	
	52		02 09	DO 11	0007D	5\$:	MOVL	#2, EXIT_OR_CONT 7\$	0332
	7E	00G	8F	94	00080 00082	6\$:	BRB MOVZBL	MBAS\$K_WHA, -(SP)	0339
	64		01 52	FB D4	00086 00089		CALLS CLRL	#1, BAS\$\$SIGNAL EXIT_OR_CONT	: 0340
		0.4	В0	13	0008B	7\$:	BEQL	1\$: 0347
0000000G	00	04	AE 01	9F FB	0008D 00090		PUSHAB CALLS	A_DESC #T, STR\$FREE1_DX	0353
	ŎŽ		52	D1	00097		CMPL	EXII_UR_CUNI, #2	0358
		00000000	0D 8f	12 00	0009A 0009C		BNEQ PUSHL	8\$	
00000000	00		01	FB 04	\$4000 \$4000	RC.	CALLS RET	M1, SYSSEXIT	0366
				000	000AA	9 \$:	.WORD	Save nothing	; 0252
	50 50	08 04 F0	AC AQ	D0			MOVL Movl	8(AP), RO 4(RO), RO	:
		FÖ	ΑO	9F	000B4		PUSHAB	A_DESC	
			01 5E	DD DD	000B7 000B9		PUSHL PUSHL	#T SP	;
0000v	7E Cf	04	AC 03	7D FB	000BB 000BF		MOVQ Calls	4(AP), -(SP) #3, FREE_STRINGS	•
0000 V	CI		0)	04	00004		RET	WJ, INEE_SININGS	•

[;] Routine Size: 197 bytes, Routine Base: _BAS\$CODE + 0004

^{; 275 0367 1}

```
G 1
16-Sep-1984 01:15:37
BAS$STOP
                                                                                                     VAX-11 Bliss-32 V4.0-742 [BASRTL.SRC]BASSTOP.B32;1
                                                                                                                                               Page
                                                                                                                                                     (4)
1-006
                                                                          14-Sep-1984 11:56:40
                  0368
0369
0370
   GLOBAL ROUTINE BAS$$STOP_INIT : NOVALUE =
                                                                                   ! Set up for RUN command
                             FUNCTIONAL DESCRIPTION:
                                     Set up for the RUN environment. Since this image is to run under the RUN command, the keyboard monitor will intercept the STOP call (by trapping
                                     the signal) and will return only if and when the program is to continue.
                                     Therefore, do not ask (redundently) for Exit or Continue.
                              FORMAL PARAMETERS:
                  0380
                                     NONE
                  0381
                  0382
0383
                              IMPLICIT INPUTS:
                  0384
                                     NONE
                  0385
                  0386
0387
                              IMPLICIT OUTPUTS:
                  0388
                                     RUN_CMD.wb
                  0389
                  0390
                              ROUTINE VALUE:
                  0391
                              COMPLETION CODES:
                  0392
0393
                                     NONE
                  0394
                  0395
                              SIDE EFFECTS:
                  0396
0397
                                     Disables the normal dialog.
                  0398
                  0399
                  0400
                  0401
                                BEGIN
                  0402
                           ! Flag that we are in the RUN environment. This will prevent the
                  0404
                              normal dialog on STOP.
   314
                  0405
   315
                  0406
                                RUN CMD = 1:
                  0407
   316
                                RETURN:
                  0408
   317
                                                                                   ! end of BAS$$RUN_INIT
                                END:
                                                                                      .ENTRY BAS$$STOP_INIT, Save nothing
                                                                                                                                                    0368
                                                                0000 00000
                                                                                               #1, RUN_CMD
                                                                                                                                                    0406
                                                                  DO 00002
                                00000000
                                                                                      MOVL
                                                                                                                                                    0408
                                                                  04 00009
                                                                                      RET
; Routine Size: 10 bytes,
                                 Routine Base: _BAS$CODE + 00C9
```

; 318

0409 1

```
ROUTINE FREE_STRINGS (
SIG,
MECH,
                0410
free local strings
                0411
                                                                                       Signal vector
                0412
                                                                                       Mechanism vector
                                   ENBL
                                                                                      Enable vector
                0414
                              ) =
                0415
                0416
                            FUNCTIONAL DESCRIPTION:
                                   If we are unwinding, free the local strings. They are passed in the enable vector.
                            FORMAL PARAMETERS:
                                                       A counted vector of parameters to LIB$SIGNAL/STOP A counted vector of info from CHF
                                   SIG.rl.a
MECH.rl.a
                                                       A counted vector of ENABLE argument addresses.
                                   ENBL.ra.a
                            IMPLICIT INPUTS:
                0430
                                   NONE
               0432
0433
                            IMPLICIT OUTPUTS:
               0434
                                   NONE
345
346
347
               0436
0437
                            ROUTINE VALUE:
                            COMPLETION CODES:
348
349
                0439
                                   Always SS$_RESIGNAL, which is ignored when unwinding.
0440
               0441
                            SIDE EFFECTS:
               0442
0443
0444
                                   frees all of the strings passed as enable arguments.
               0445
                0446
                0447
                              BEGIN
               0448
                              MAP
               0450
0451
0452
0453
0454
                                   SIG : REF VECTOR, MECH : REF VECTOR,
361
363
364
3667
368
377
377
377
377
377
377
                                   ENBL : REF VECTOR;
                          ! Only free the strings if this is the UNWIND condition.
                0456
               0457
0458
0459
                               IF ( NOT (LIBSMATCH_COND (SIG [1], %REF (SS$_UNWIND)))) THEN RETURN (SS$_RESIGNAL);
                C460
                0461
                           Go through the enable arguments, freeing them.
                0462
                               INCR ARG NO FROM 1 TO .ENBL [0] DO BEGIN
                0464
                0465
                0466
                                   STR$FREE1_DX (.ENBL [.ARG_NO]);
```

BAS\$STOP 1-006		I 1 16-Sep-1984 01:15:37 VAX 14-Sep-1984 11:56:40 [BA	(-11 Bliss-32 V4.0-742 Page 10 SRTL.SRCJBASSTOP.B32;1 (5)			
: 377 0467 2 : 378 0468 2 : 379 0469 2 : 380 0470 1	END; RETURN (SS\$_RESIGNAL); END;	! end of FREE_STRINGS				
70 FOR Property of the second	7E 0920 8F 5E 00000000G 00 02 14 50 00 0000000G 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	11 00018 11 0001A DD 0001C 1\$: PUSHL @ENBL[ARG FB 00020 F3 00027 2\$: AOBLEQ @ENBL, AR 3C 0002C 3\$: MOVZWL #2328, RO 04 00031 CLRL ARG_NO CALLS #1, STR\$F F3 00020 RET	-(SP) IATCH_COND 0464 INO] REE1_DX IG_NO, 1\$ 0464 0469 0470			
Name BAS\$DATA BAS\$CODE	PSECT SUMMARY Bytes 4 NOVEC, WRT, 261 NOVEC,NOWRT,	Attributes RD .NOEXE.NOSHR, LCL, REL, CON, RD , EXE, SHR, LCL, REL, CON,	PIC,ALIGN(2) PIC,ALIGN(2)			
; ;	Library Statistics	mbols Pages Pro	cessing			
file _\$255\$DUA28:[SYSLIB]STAI	Total Lo	aded Percent Mapped Tim	0:01.1			

.

COMMAND QUALIFIERS

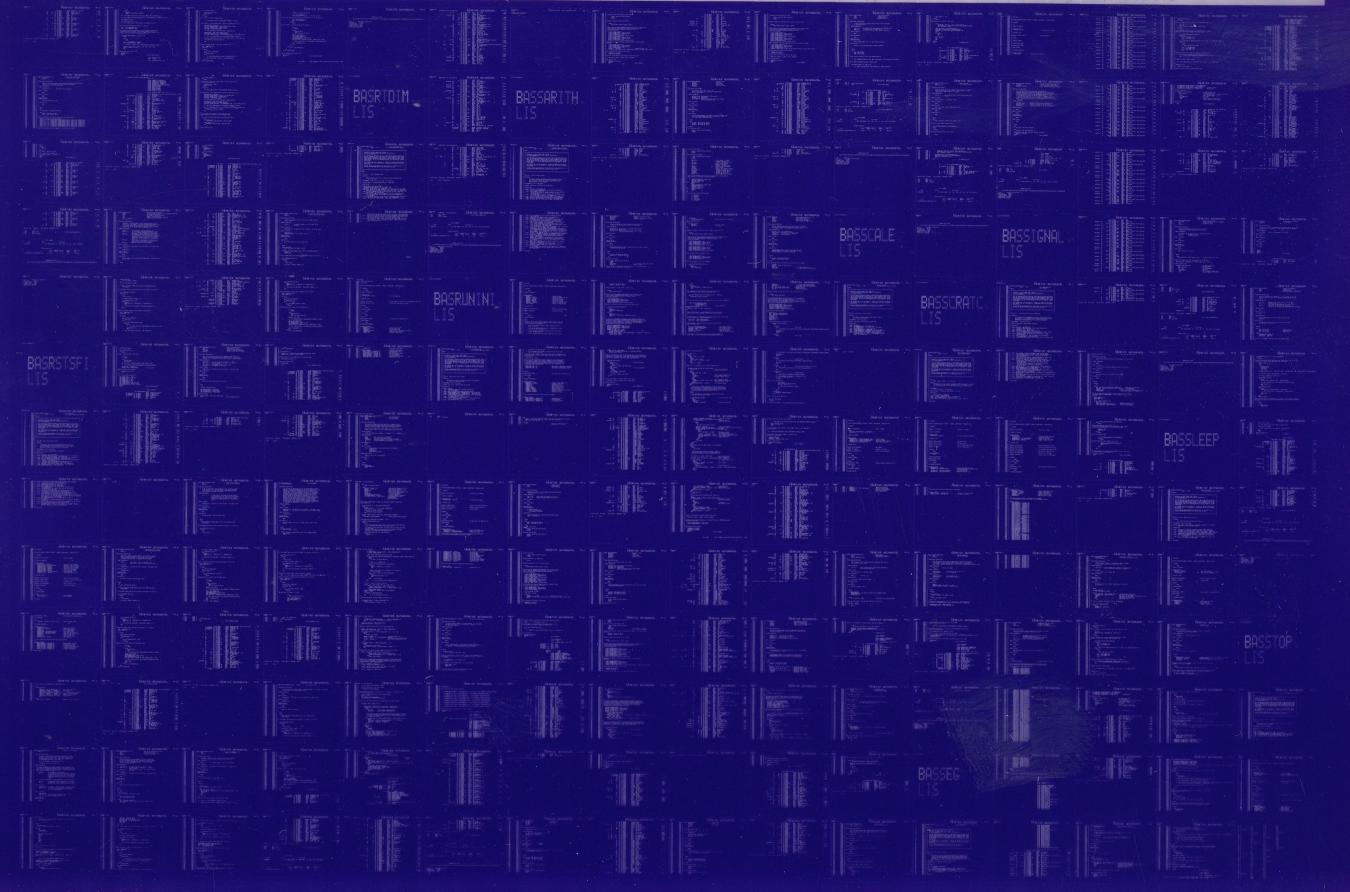
BLISS/CHECK=(FIELD, INITIAL, OPTIMIZE)/NOTRACE/LIS=LIS\$:BASSTOP/OBJ=OBJ\$:BASSTOP MSRC\$:BASSTOP/UPDATE=(ENH\$:BASSTOP)

: Size: 257 code + 8 data bytes
: Run Time: 00:07.0
: Elapsed Time: 00:14.7
: Lines/CPU Min: 4054
: Lexemes/CPU-Min: 13277
: Memory Used: 74 pages
: Compilation Complete

BAS\$STOP 1-006

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